



HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450, ON THE DATE INDICATED BELOW.

BY:

Allen Itoh

Date:

August 1, 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	Nobuya ITOH	§ Group Art Unit: 1652
		§
		§
Conf. No.:	7835	§ Examiner: Kagnew H. Gebreyesus, Ph.D.
		§
Appln. No.:	10/782,998	§ Allowed May 2, 2006
		§
Filing Date:	February 20, 2004	§ Attorney Docket No.: 600630-15US
		§ (562737)
Title:	REDUCTASE GENE AND USE OF THE SAME	

DECLARATION OF HIROYUKI ASAKO
REGARDING SECOND REPLACEMENT SEQUENCE LISTINGS

I, Hiroyuki Asako, hereby declare as follows:

1. I am the research associate with Sumitomo Chemical Co., Ltd. ("Sumitomo"), the assignee of the rights in the above-identified patent application, based on an Assignment from the inventor, Nobuya Itoh, recorded in the U.S. Patent and Trademark Office on April 21, 2004, at Reel 015247, beginning at Frame 0239. I graduated with a Masters Degree from Tokyo Institute of Technology Department of Bioscience and Biotechnology in March, 1997. I began at Sumitomo in April, 1997 and have been engaged in biochemical research such as gene technology, fermentation, recombinant technology, bioconversion, and the like. I have been working with the inventor and Sumitomo's patent attorneys and am familiar with this application and its file history.

2. I was asked to review the application following receipt of the second Notice of Allowance dated May 2, 2006, prior to payment of the issue fee to make sure that the information in the application is accurate. Upon reviewing the Amended Sequence Listing filed

March 13, 2006, I realized that further corrections to the Sequence Listings for SEQ ID NOS:1 and 2 are needed.

3. The errors occurred as a result of yet further simple mistakes when reading the nucleotide sequence of SEQ ID NO:2 of the original gene of plasmid ptrTFAR that was analyzed with an ABI Prism 310 Genetic Analyzer, where the mistakes are identified as follows:

(1) 123rd Nucleotide (123rd Original Nucleotide): Peak of "C" was buried by peak "A" due to succession of "A".

(2) 246th Nucleotide (246th Original Nucleotide): Peak of "C" was confirmed by performing analysis again. Same as original sequence.

(Correction made in the 1st Declaration turned out to be wrong)

(3) 467th Nucleotide (467th Original Nucleotide): Peak of "C" was buried by peak "G" due to continuation of "G" and "C".

(4) 575th Nucleotide (between 574th and 575th Original Nucleotide): Peak of "C" was buried due to continuation of "C" and low sensitivity of peak "C".

(5) 590th Nucleotide (between 588th and 589th Original Nucleotide): Peak of "C" was buried due to succession of "G" and "C" and low sensitivity of peak "C".

(6) 595th Nucleotide (593rd Original Nucleotide): Peak of "C" was buried due to succession of "T" and "C" and low sensitivity of peak "C".

(7) 597th Nucleotide (595th Original Nucleotide): Peak of "C" was buried due to succession of "T" and "C" and low sensitivity of peak "C".

(8) 619th Nucleotide (617th Original Nucleotide): Peak of "C" was buried by peak "T" due to continuation of "T" and "C".

(9) 622nd Nucleotide (620th Original Nucleotide): Peak of "G" was buried due to succession of "A" and "G" and low sensitivity of peak "G".

(10) 627th Nucleotide (between 624th and 625th Original Nucleotide): Peak of "C" was confirmed by performing analysis again.

(11) 695th Nucleotide (692nd Original Nucleotide): Peak of "A" was confirmed by performing analysis again. Same as original sequence.

(Correction made in the 1st Declaration turned out to be wrong)

4. Attached is a copy of a ClustalW Formatted Alignments printout showing the nine mistakes identified in paragraph 3 above. Also attached is a comparison of the original and amended nucleotide sequence for SEQ ID NO:1, based on the corrections to the nucleotide sequence of SEQ ID NO:2.

5. The errors were inadvertent and without any disceptive intention.

6. Since the DNA of SEQ ID NO:2 is from the same *Leifsonia* sp. S-749 (Accession No. of International Depositary Authority: FERM BP-8291) and is the original gene of plasmid ptrTFAR as set forth in the application, no new matter has been added by correcting the nucleotide sequence of the DNA in SEQ ID NO:2.

7. In view of the corrections made to SEQ ID NO:2, the corresponding amino acids of SEQ ID NO:1 coded by the DNA of SEQ ID NO:2 also required correction. The corrections are noted in the attached comparison of the original amino acid sequence and the amended amino acid sequence for SEQ ID NO:1. For the same reasons as mentioned in paragraph 6, although corrections have been made to the amino acid sequence, no new matter has been added.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

HIROYUKI ASAKO

July 24, 2006
(Date)

Hiroyuki Asako

Original amino acid sequence

Met Ala Gln Tyr Asp Val Ala Asp Arg Ser Ala Ile Val Thr Gly Gly
 1 5 10 15
 Gly Ser Gly Ile Gly Arg Ala Val Ala Leu Thr Leu Ala Ala Ser Gly
 20 25 30
 Ala Ala Val Leu Val Thr Asp Leu **Lys** Glu Glu His Ala Gln Ala Val
 35 40 45
 Val Ala Glu Ile Glu Ala Ala Gly Lys Ala Ala Ala Leu Ala Gly
 50 55 60
 Asp Val Thr Asp Pro Ala Phe Gly Glu Ala Ser Val Ala Gly Ala Asn
 65 70 75 80
 Ala Leu Ala Pro Leu Lys Ile Ala Val Asn Asn Ala Gly Ile Gly Gly
 85 90 95
 Glu Ala Ala Thr Val Gly Asp Tyr Ser Leu Asp Ser Trp Arg Thr Val
 100 105 110
 Ile Glu Val Asn Leu Asn Ala Val Phe Tyr Gly Met Gln Pro Gln Leu
 115 120 125
 Lys Ala Met Ala Ala Asn Gly Gly Ala Ile Val Asn Met Ala Ser
 130 135 140
 Ile Leu Gly Ser Val Gly Phe Ala Asn Ser Ser **Gly** Tyr Val Thr Ala
 145 150 155 160
 Lys His Ala Leu Leu Gly Leu Thr Gln Asn Ala Ala Leu Glu Tyr Ala
 165 170 175
 Ala Asp Lys Val Arg Val Val Ala Val Gly Pro Gly Phe Ile Arg Thr
 180 185 190
Arg **Ser** **Trp** **Arg** **Gln** **Leu** **Phe** **Arg** **Arg** **Ala** **Gly** **Val** **Leu** **Gln** **Gly**
 195 200 205
 Lys His Ala Leu Gly Arg Leu Gly Glu Pro Glu Glu Val Ala Ser Leu
 210 215 220
 Val Ala Phe Leu Ala Ser Asp Ala Ala Ser Phe Ile Thr Gly Ser Tyr
 225 230 235 240
 His Leu Val Asp Gly Gly Tyr Thr Ala Gln
 245 250

Amended amino acid sequence

Met Ala Gln Tyr Asp Val Ala Asp Arg Ser Ala Ile Val Thr Gly Gly
 1 5 10 15
 Gly Ser Gly Ile Gly Arg Ala Val Ala Leu Thr Leu Ala Ala Ser Gly
 20 25 30
 Ala Ala Val Leu Val Thr Asp Leu **Asn** Glu Glu His Ala Gln Ala Val
 35 40 45
 Val Ala Glu Ile Glu Ala Ala Gly Lys Ala Ala Ala Leu Ala Gly
 50 55 60
 Asp Val Thr Asp Pro Ala Phe Gly Glu Ala Ser Val Ala Gly Ala Asn
 65 70 75 80
 Ala Leu Ala Pro Leu Lys Ile Ala Val Asn Asn Ala Gly Ile Gly Gly
 85 90 95
 Glu Ala Ala Thr Val Gly Asp Tyr Ser Leu Asp Ser Trp Arg Thr Val
 100 105 110
 Ile Glu Val Asn Leu Asn Ala Val Phe Tyr Gly Met Gln Pro Gln Leu
 115 120 125
 Lys Ala Met Ala Ala Asn Gly Gly Ala Ile Val Asn Met Ala Ser
 130 135 140
 Ile Leu Gly Ser Val Gly Phe Ala Asn Ser Ser **Ala** Tyr Val Thr Ala
 145 150 155 160
 Lys His Ala Leu Leu Gly Leu Thr Gln Asn Ala Ala Leu Glu Tyr Ala
 165 170 175
 Ala Asp Lys Val Arg Val Val Ala Val Gly Pro Gly Phe Ile Arg Thr
 180 185 190
Pro **Leu** **Val** **Glu** **Ala** **Asn** **Leu** **Ser** **Ala** **Asp** **Ala** **Leu** **Ala** **Phe** **Leu** **Glu**
 195 200 205
 Gly Lys His Ala Leu Gly Arg Leu Gly Glu Pro Glu Glu Val Ala Ser
 210 215 220
 Leu Val Ala Phe Leu Ala Ser Asp Ala Ala Ser Phe Ile Thr Gly Ser
 225 230 235 240
 Tyr His Leu Val Asp Gly Gly Tyr Thr Ala Gln
 245 250

SEQ ID NO:2

1: ATGGCTCAGTACGACGTCGCCGACCGGTCCGCGATCGTGACCGGAGCGGCTCGGGCATC 60
 1: ATGGCTCAGTACGACGTCGCCGACCGGTCCGCGATCGTGACCGGAGCGGCTCGGGCATC 60

61: GGGCGCGCGTGGCGCTCACTCTCGGGCGAGCGCGGAGCGGCTCCTCGTACCGACCTG 120
 61: GGGCGCGCGTGGCGCTCACTCTCGGGCGAGCGGCGGAGCGGCTCCTCGTACCGACCTG 120

121: AFAEAGGAGCACGCGCAGGCGGTCTGTGGCCGAGATCGAGCCGCGGGCGGTAAAGCCGCC 180
 121: AFAEAGGAGCACGCGCAGGCGGTCTGTGGCCGAGATCGAGCCGCGGGCGGTAAAGCCGCC 180

181: GCGTCGCGGGCGAGTGACCGACCCCGGTTTCGGCGAGCGAGCGTCCGCGGGCGAAC 240
 181: GCGTCGCGGGCGAGTGACCGACCCCGGTTTCGGCGAGCGAGCGTCCGCGGGCGAAC 240

241: GCTCTCGGCCCTCAAGATCGGGTCAACAAACGGGGCATCGGCGGAGGCCGCCACG 300
 241: GCTCTCGGCCCTCAAGATCGGGTCAACAAACGGGGCATCGGCGGAGGCCGCCACG 300

301: GTCGGGACTACTCGCTCGACAGTGGCGCACGGTATCGAGGTCAACCTCAACGCCGTG 360
 301: GTCGGGACTACTCGCTCGACAGTGGCGCACGGTATCGAGGTCAACCTCAACGCCGTG 360

361: TTCTACGGGATCAGCGCAGCTGAAGCCATGGCCGCCAACCGGCGGTCGATCGTC 420
 361: TTCTACGGGATCAGCGCAGCTGAAGCCATGGCCGCCAACCGGCGGTCGATCGTC 420

123A⇒C

467G⇒C

575 - ⇒C

590 - ⇒C

595T⇒C

597T⇒C

619T⇒C

622A⇒G

627 ⇒C

421: AACATGGCGTCCATCCTTGGAAGCGTCGGCTTCGCCAACTCGTCGGCTTACGTACCGGCC 480
 421: AACATGGCGTCCATCCTTGGAAGCGTCGGCTTCGCCAACTCGTCGGCTTACGTACCGGCC 480

481: AAGCACGCGTCTCGGTCTCACCAGAAACGCGCGCTCGAGTACGCCGCCGACAAGGTG 540
 481: AAGCACGCGTCTCGGTCTCACCAGAAACGCGCGCTCGAGTACGCCGCCGACAAGGTG 540

541: CGCGTCGTGCGGTGCGGCCCGGCTTCATCCGCAACCGCTCGTGGAGGTAACCTTTCC 598
 541: CGCGTCGTGCGGTGCGGCCCGGCTTCATCCGCAACCGCTCGTGGAGGTAACCTTTCC 600

599: GCCGACGCGTGGCGTTCTCAAGGGAAGCACGCCCTCGGCCCTCGGGCGAGCCGGAA 657
 601: GCCGACGCGTGGCGTTCTCAAGGGAAGCACGCCCTCGGCCCTCGGGCGAGCCGGAA 660

658: GAGGTCGCCTCGTGGTCGGCTTCCTCGCTCCGACGCCGAGCTTCATCACCGGCAGC 717
 661: GAGGTCGCCTCGTGGTCGGCTTCCTCGCTCCGACGCCGAGCTTCATCACCGGCAGC 720

718: TACCACCTGGTGGACGGCGGTACACCGCCAGTGA 753
 721: TACCACCTGGTGGACGGCGGTACACCGCCAGTGA 756

Upper sequence : original nucleotide sequence

Lower sequence : amended nucleotide sequence